

## **MOLECULAR WIRE INJECTION SENSORS**

### **Abstract of the Disclosure**

5 Disclosed is a sensor for sensing the presence of an analyte component without relying on redox mediators. This sensor includes (a) a plurality of conductive polymer strands each having at least a first end and a second end and each aligned in a substantially common orientation; (b) a plurality of molecular recognition headgroups having an affinity for the analyte component and being attached to the first ends of the conductive polymer  
10 strands; and (c) an electrode substrate attached to the conductive polymer strands at the second ends. The electrode substrate is capable of reporting to an electronic circuit reception of mobile charge carriers (electrons or holes) from the conductive polymer strands. The electrode substrate may be a photovoltaic diode.